

Remarks

Applicants understand that this second Office Action has been made final due to the raising of a new ground of rejection under 35 USC § 112. Applicants respectfully contest the raising of this new ground as explained below and request that this response should be duly entered.

Examiner has indicated that Claim 44, filed with the Applicants' previous response, shows no amendment. The penultimate clause of Claim 44 was amended to introduce the word "connection" as follows:

"charging the first subscriber for leasing the direct isolated connection..."

Claim Rejections – 35 USC § 112

Examiner has rejected Claims 1-35 and 40-42 as failing to comply with the written description requirement. Applicants respectfully request that this rejection is withdrawn in view of the following explanation.

Claim 1 recites a communication system with a core network (12, Fig.1) and multiple isolated connections (60, 62, 64 Fig.1) to a plurality of distribution gateways (68, 70, 72 Fig.1). The distribution gateways are interconnected with each other (86, 88 Fig.1). Control functionality (80, Fig.1) administers access between a gateway and the core network. As recited in the final clause of Claim 1, the control functionality is arranged:

"wherein a first of the gateways accesses the core network via an isolated connection to a second of the gateways when an isolated connection to the first gateway is unable to support access to the core network."

The passage at page 19 lines 4-25 and the flow chart of Figure 4 describe the process by which a gateway requests communication capacity.

"The system remains in a loop until communication capacity is requested 206." (page 19 lines 7-8). "An assessment is then made as to whether a leased link (i.e. a direct isolated connection between the network and the gateway) is operational (step 208)" (page 19 lines 8-10). "Should the direct point-to-point connection fail (path 226 from decision block 208) the process skips to the step of arbitration 214." (page 19 lines 24-25).

If the isolated link is operational "...a decision is then made as to whether extra bandwidth is available/required. Should extra bandwidth be available through indirect isolated links associated with interconnected home-gateways, the interconnected home-gateways undertake arbitration 214 to determine link capacity" (page 19 lines 11-12).

Summarizing the above, it is clear that if the isolated connection between the first gateway is not operational or has insufficient bandwidth (i.e. the isolated connection is unable to support access to the core network), the gateway proceeds to arbitration, where an indirect path to the core network is negotiated via a second gateway in the group of gateways.

Examiner is further directed to the following passages of the specification:

- page 10 lines 6-8 "With the ability of having access to multiple, non-adjacent (essentially point-to-point) communication resources, the system of the present invention is able to benefit from acquired redundancy that protects against link failure."
- page 13 lines 14-16 "The present invention addresses the bandwidth limitations of an individual xDSL connection to the home by exploiting novel interconnection capabilities of multiple home-gateway devices.."
- page 14 lines 2-6 "..the present invention uses the capability for a subscriber's home-gateway dynamically to utilize additional bandwidth on neighbouring

- (but isolated) DSL connections such that the subscriber has access to increased bandwidth and can consequently experience a service quality greater than that supported by his own DSL line in isolation."
- page 15 lines 12-16 "The access control logic instructs the consolidation function to direct downstream information packets to the direct link to an end customer or to an indirect link via another customer attached to the VNN according to congestion conditions.."
 - page 17 lines 10-12 "In relation to the securing of bandwidth on neighbouring point-to-point communication resources, the control logic of each home-gateway wishing to acquire additional capacity negotiates with a neighbouring gateway...."

The similar wording used in rejected Claims 9, 18, 24, 31, 40 is also supported by the passages of the specification indicated above.

Claim 39

Claim 39 stands rejected under 35 USC § 112 as being indefinite. Claim 39 now explicitly recites the two sets of code that were intended to be covered by the term "codes".

Claim Rejections – 35 USC § 102

Examiner continues to reject claims 1-2, 5, 9, 11, 14, 18-19, 21, 24-26, 29, 31-32, 34, 40, 41 and 43 under 35 USC § 102(b) as being anticipated by *Kamm et al.* (US 5,457,680). Reconsideration is again requested.

Applicants have previously reasoned why these claims are patentably distinguished over *Kamm*. Examiner has indicated that the added limitation in Claim 1 of "wherein a first of the gateways accesses the core network via an isolated connection to a second of the gateways when an isolated connection to the first gateway is unable to support access to the core network" is disclosed by a further passage of *Kamm*. In

Claim 1 of the present invention, the basis for accessing the network via a direct isolated connection or a second isolated connection and second gateway is whether the direct isolated connection can support access to the core network. The passage of *Kamm* indicated by the Examiner simply describes how traffic is rerouted to a second base station depending on the signal strength between a mobile and a base station. The routing, in *Kamm*, has nothing to do with whether the direct isolated connection (T1) between a gateway and the core network can support access to the core network. In *Kamm*, traffic is always first routed to the home gateway (e.g. gateway 104) of a mobile. If signal strength measurements between a mobile and various base stations (B1-B3) in the system indicate that another base station offers a better wireless link to the mobile, then the traffic is forwarded to another base station. If the new base station is served by a different gateway, then this requires the home gateway to forward the traffic to another gateway serving that base station. At all times, traffic is always first routed to the home gateway of a mobile and the routing is based entirely on signal strength of the wireless link within cells served by B1-B3.

Rejected independent Claims 9, 18, 24, 31, 40 and 43 are considered to be allowable for the same reasons.

In relation to claim 43, Examiner has continued to overlook that this claim requires that data packets are sent in an un-encrypted form across a direct isolated connection existing between the network and the distribution gateway and sent in an encrypted form across an indirect isolated connection existing between the network and a second distribution gateway. Consequently, claim 43 is not anticipated by *Kamm*.

Rejected dependent claims 2, 5, 11, 14, 19, 25, 26, 29, 32, 34 and 41 are also considered allowable at least by virtue of their dependency on an allowable base claim.

Claim Rejections – 35 USC § 103

Examiner continues to reject claims 3, 12, 27 and 42 under 35 USC § 103(a) as being obvious over *Kamm et al* in view of *Mahalingaiah* (US 6,654,346). It is respectfully submitted that the rejected claims are allowable at least by virtue of the allowability of the claims on which they depend.

Kamm is deficient for the reasons explained above. *Mahalingaiah* does not provide any teaching of routing between a gateway and a core network via a direct path or indirect path depending on the ability of an isolated connection to support access. Therefore, even a combination of *Kamm* and *Mahalingaiah* does not disclose the features of claims 1, 9, 24 or 40, from which the rejected claims depend.

Examiner rejects claims 4, 13, 20, 28 and 33 under 35 USC § 103(a) as being obvious over *Kamm et al* in view of *Shionozaki* (US 6,496,479). These claims are considered to be allowable at least by virtue of the allowability of the claims on which they depend.

Kamm is deficient for the reasons explained above. *Shionozaki* does not provide any teaching of routing between a gateway and a core network via a direct path or indirect path depending on the ability of an isolated connection to support access. Therefore, even a combination of *Kamm* and *Shionozaki* does not disclose the features of claims 1, 9, 18, 24 or 31, from which the rejected claims depend.

Examiner rejects claims 6-8, 10, 15-17, 22-23, 30, 35-36 and 38-39 under 35 USC § 103(a) as being obvious over *Kamm et al.* in view of *Davis et al.* (US 6,167,389). These claims are considered to be allowable at least by virtue of the allowability of the claims on which they depend.

Kamm is deficient for the reasons explained above. *Davis* does not provide any teaching of routing between a gateway and a core network via a direct path or indirect path depending on the ability of an isolated connection to support access. Therefore, even a combination of *Kamm* and *Davis* does not disclose the features of claims 1, 9, 18, 24 or 31, from which the rejected claims depend.

Examiner rejects claim 37 under 35 USC § 103(a) as being obvious over *Kamm et al* in view of *Davis* and further in view of *Shionozaki*. This claim is considered to be allowable at least by virtue of the allowability of claim 36 on which it depends.

Kamm is deficient for the reasons explained above. Neither *Davis* nor *Shionozaki* provide any teaching of routing between a gateway and a core network via a direct path or indirect path depending on the ability of an isolated connection to support access. Therefore, even a combination of *Kamm*, *Davis* and *Shionozaki* does not disclose the features of claim 36 from which the rejected claim depends.

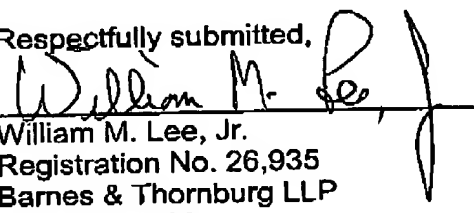
Allowable Subject Matter

The Examiner's Indication of the allowability of claims 44-46 is noted and appreciated.

For the foregoing reasons, Applicants respectfully submit that the claims pending in this application are in condition for allowance. Early issuance of a Notice of Allowance is solicited.

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Respectfully submitted,


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